

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for producing a hydroxyl-modified ethylene- α -olefin copolymer, the method comprising:

~~mixing~~ kneading 100 parts by weight of an ethylene- α -olefin copolymer having a Mooney viscosity of 10 to 250 at 100°C and 0.1 to 20 parts by weight of a peroxide having a hydroperoxy group, wherein the peroxide has a 10-hour half-life temperature and a 1-minute half-life temperature; and

heating a mixture containing the peroxide and the ethylene- α -olefin copolymer at a temperature equal to or exceeding the 10-hour half-life temperature of the peroxide having a hydroperoxy group and not higher than the 1-minute half-life temperature of the peroxide having a hydroperoxy group to ~~selectively~~ introduce hydroxyl groups into the ethylene- α -olefin copolymer without causing cross-linking and degradation of the ethylene- α -olefin copolymer.

2. (Currently Amended) A method for producing a hydroxyl-modified ethylene- α -olefin copolymer, the method comprising:

~~mixing~~ kneading 100 parts by weight of an ethylene- α -olefin copolymer, 0.1 to 20 parts by weight of a peroxide having a hydroperoxy group, and a radical generator having a radical generating group so that not more than 1 mole of the radical generating groups are present with respect to 1 mole of the hydroperoxy groups, wherein said peroxide has a 10-hour half-life

temperature and said radical generator has a 10-hour half-life temperature not higher than the 10-hour half-life temperature of the peroxide; and

heating a mixture containing the ethylene- α -olefin copolymer, the peroxide and the radical generator at a temperature equal to or exceeding the 10-hour half-life temperature of the radical generator and not higher than 220°C to ~~selectively~~ introduce hydroxyl groups into the ethylene- α -olefin copolymer without causing cross-linking and degradation of the ethylene- α -olefin copolymer.

3. (Previously Presented) The method according to claim 2, wherein the peroxide is t-butyl hydroperoxide, t-amyl hydroperoxide, t-hexyl hydroperoxide, t-octyl hydroperoxide, cumene hydroperoxide or diisopropylbenzene hydroperoxide.

4. (Cancelled).

5. (Previously Presented) The method according to claim 2, wherein the ethylene- α -olefin copolymer has Mooney viscosity of 10 to 250 at 100°C.

6. (Previously Presented) The method according to claim 2, wherein the radical generator is a compound having a 1-minute half-life temperature not higher than 195°C.

7. (Previously Presented) The method according to claim 2, wherein the ethylene- α -olefin copolymer is a bipolymer of ethylene and an α -olefin or a terpolymer of ethylene, an α -olefin and a diene.
8. (Previously Presented) A hydroxyl-modified ethylene- α -olefin copolymer produced by the method according to claim 2, the modified copolymer containing 0.001 to 1 mole of hydroxyl groups per 1 kg of the modified copolymer and having Mooney viscosity of 10 to 250 at 100°C.
9. (Original) A hydroxyl-modified ethylene- α -olefin copolymer composition comprising:
the hydroxyl-modified ethylene- α -olefin copolymer according to claim 8; and
at least one member selected from the group consisting of a thermoplastic resin, a filler, an antioxidant, a light stabilizer, a plasticizer, a lubricant, a flame retardant and a colorant.
10. (Previously Presented) The method according to claim 1, wherein the peroxide is t-butyl hydroperoxide, t-amyl hydroperoxide, t-hexyl hydroperoxide, t-octyl hydroperoxide, cumene hydroperoxide or diisopropylbenzene hydroperoxide.
11. (Cancelled).
12. (Cancelled).

13. (Previously Presented) The method according to claim 1, wherein the ethylene- α -olefin copolymer is a bipolymer of ethylene and an α -olefin or a terpolymer of ethylene, an α -olefin and a diene.

14 (Previously Presented) A hydroxyl-modified ethylene- α -olefin copolymer produced by the method according to claim 1, the modified copolymer containing 0.001 to 1 mole of hydroxyl groups per 1 kg of the modified copolymer and having Mooney viscosity of 10 to 250 at 100°C.

15. (Previously Presented) A hydroxyl-modified ethylene- α -olefin copolymer composition comprising:

the hydroxyl-modified ethylene- α -olefin copolymer according to claim 14; and
at least one member selected from the group consisting of a thermoplastic resin, a filler, an antioxidant, a light stabilizer, a plasticizer, a lubricant, a flame retardant and a colorant.

16. (Previously Presented) The method according to claim 1, wherein said heating includes replacing a hydrogen atom of the ethylene- α -olefin copolymer by a hydroxyl group of the peroxide having a hydroperoxy group.

17. (Previously Presented) The method according to claim 2, wherein said heating includes replacing a hydrogen atom of the ethylene- α -olefin copolymer by a hydroxyl group of the peroxide having a hydroperoxy group.